

JTWC 20101003-10 Visit Objectives

- 1: WxMAP2 upgrade
 - 2: TDO training on using HFIP-supported TC forecast tools
 - 3: TC forecasting seminar for HI community
 - 4: FIMchem developments at ESRL
-

Mike Fiorino

CDR USN(ret)

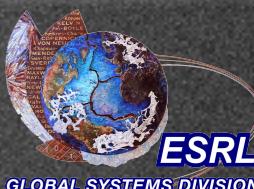
B.S. (PSU:75), M.S. (PSU:78), Ph.D. (NPS:87) (all) in Meteorology

Assimilation and Modeling Branch
Global Systems Division, Earth System Research Lab
Boulder CO

michael.fiorino@noaa.gov



JTWC 201010 Objectives



Objective 1.0: upgrade to WxMAP2

install wxmap2

- 32-bit centos5.5 tarball
 - /w21/app - binaries for python, opengrads1.10, opengrads2.0
 - /w21/bin - utilities - xv, dtg6 ...
 - /w21/dat/geog; climo; - fixed data files
- svn co of scripts/web/source from repo @ [wxmap2.sf.net](https://wxmap2.svn.sourceforge.net)
 - svn co <https://wxmap2.svn.sourceforge.net/svnroot/wxmap2/trunk/prc>
 - svn co <https://wxmap2.svn.sourceforge.net/svnroot/wxmap2/trunk/src>
 - svn co <https://wxmap2.svn.sourceforge.net/svnroot/wxmap2/trunk/etc>
 - svn co <https://wxmap2.svn.sourceforge.net/svnroot/wxmap2/trunk/web/>
 - svn co <https://wxmap2.svn.sourceforge.net/svnroot/wxmap2/trunk/app/src/python>
 - svn co <https://wxmap2.svn.sourceforge.net/svnroot/wxmap2/trunk/app/src/opengrads>
- build .fTC applications
 - ngtrk.x - fnmoc tracker
 - gettrk_gen.x - gfdl genesis tracker
 - tcsanal.x - tc structure analysis



JTWC 201010 Objectives



Objective I.I: WxMAP2 data flows

local CAGIPS NOGAPS, NCEP GFS/UKM

FIM model fields from ESRL

TC atcf data files from NHC/JTWC

EPS data flows from ecmwf, ukmo, ncep, cmc

ACCESS-G(T) fields from BoM, OZ



JTWC 201010 Objectives



Objective I.2: JTWC-specific WxMAP2 dev

*w2.jtwc.nwp2.py – super script that handles all data/plot/web
add NOGAPS EPS to w2.tc.g.epsanal.py – add to local TCeps
page*



JTWC 201010 Objectives



WxMAP2 TC Components

grayed out: available in the s/w put in alpha state

TCgen (HFIP) - display and analysis of GFDL genesis tracker

TCdiag (HFIP) - input to SHIPS/LGEM intensity model

TCeps (HFIP) - display and analysis of global-model ensemble prediction system (EPS) tracker output

TCactivity - scaled TC days + ACE maps/time series + ‘spectographs’

TCveri - ATCF a/bdeck → mdeck, vdeck → track/vmax error stats

TCstruct - sfc wind structure analysis

TCfilt - vortectomy - remove vortex from a field

TCanal - TDO Circle of Trust (TCOT), Polygonal Cone of Death (PCOD)

TCclimo – Gray seasonal genesis parameter



JTWC 201010 Objectives



WxMAP2 NWP/Web Components

wxmaps – w2.plot.py

web – w2.web.py

veri – WMO verification stats, e.g., 500 d+5 nhem AC



JTWC 2010 Objectives



Objective 2: TDO Training

finish documentation of main HFIP-supported tools in the form of 30 min ppt briefs

TCdiag – large-scale environmental parameters used in SHIPS/LGEM (STIPS in WPAC) for intensity prediction

TCeps – ‘hit’ and strike prob analysis of trackers from global-model ensemble prediction systems (EPS) for assessing uncertainty and developing alternate scenarios

TCgen – analysis and display of the GFDL ‘genesis’ tracker output from 5+ global models for long-range (3-6 d) forecasts of TC development potential and TCFA (tropical cyclone formation alert)

WxMAP2 – buttonology and application to TC forecasting – deconvolution of the meteorology implied by the CONW track...



JTWC 201010 Objectives



**Objective 3: Seminar for TC community in HI
how and why TC track prediction can be viewed as a data assimilation process...**

TC track forecasting as A Data assimilation process calculating the TDO circle of trust

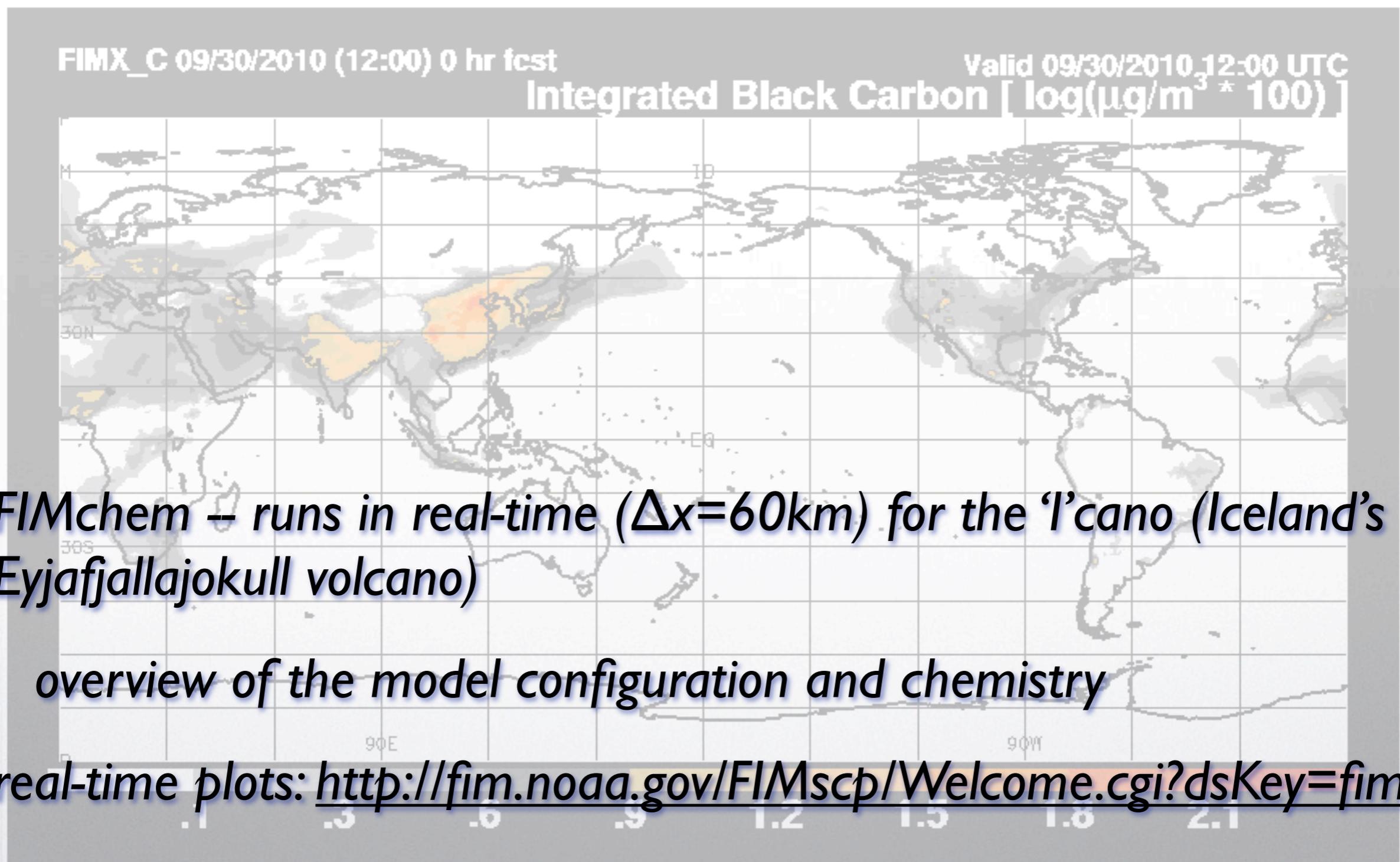


JTWC 201010 Objectives



Objective 4: Brief USAF (17 OWS) and USN (NMFC) on FIMchem

Experimental FIM Model Fields



JTWC 201010 Objectives

